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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,999	12/15/2003	Christopher Weare	306392.01	2978

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EXAMINER

LU, KUEN S

ART UNIT PAPER NUMBER

2167

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/735,999	WEARE, CHRISTOPHER	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 15-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 29-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/26/04 & 4/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Action is responsive to Applicant's Application, filed December 15, 2003.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14 and 29-41, drawn to extracting data, classified in class 707, subclass 102;
- II. Claims 15-25, drawn to evaluating multiple documents, classified in class 707, subclass 101; and
- III. Claims 26-28, drawn to accessing to and requesting data from web server, classified in class 707, subclass 10.

3. The inventions are distinct, each from another because of the following reasons:

Inventions I, II and III are related as sub-combinations disclosed as usable together in a single combination. The sub-combinations are distinct from each other if they are shown to be separately usable.

In the instant case, invention I is related to application of data structure, involving method for extracting features data from received information and using features data to group information into cluster for publication.

Invention II is specifically related to evaluating multiple documents and grouping the documents into cluster based on threshold value of relevancy factor calculated from occurrence of extracted tokens.

As to Invention III, it is related to web server accessing cluster data of preprocessor and making documents available to requester from the web.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Further, because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

Applicant is reminded that the reply to this restriction election to be completed must include an election of the invention to be examined within one month from the mailing date of this office action, even though the requirement be traversed (37 CFR 1.143).

4. During a telephone conversation with Mr. Stephen C. Siu on July 13, 2006, a provisional election was made without traverse to prosecute the invention I, Claims 1-14 and 29-41. Affirmation of this election must be made by applicant in replying to this Office Action.

Claims 15-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Information Disclosure Statement

5. The Information Disclosure Statement filed February 26, 2004 and April 9, 2004 has been considered. Attached and electronically signed are PTO-1449 forms.

Drawings

6. The drawings filed December 15, 2003 have been accepted.

Specification

7. The use of the trademark GOOGLE, YAHOO, ASSOCIATED PRESS, REUTERS and NEW YORK TIEMS have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

8. Claims 1-2 and 29-30 are objected to because of the following informalities:

As per claims 1 and 29, a method and a medium claims where steps or instructions for steps are performed, however, the cited terms and phrase "extracting", "grouping" and "the grouping step" are not consistent among elements and claim preamble.

Appropriate correction is required.

As per claims 2 and 30, "**a combination of one** or more of text data, image data **or** video data" is recited. Examiner interprets it as "one or more of text data, image data **and** video data". Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.1. Claims 1-14 and 29-41 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

As per claims 1-14, the claimed invention represents an abstract methodology by simply performing the step of extracting features from received information, grouping the information, based the features, into clusters and publishing the information. The steps do not produce tangible result because the steps are abstract; however, tangible, concrete and useful result is required in a practical application test. The consequence is non-statutory.

Furthermore, Claims 29-41 are directed to machine readable medium containing instructions. However, the claimed "machine readable medium containing instructions" comprises wireless telecommunication signals and carrier waves, forms of energy. As forms of energy, the signals and waves are not a matter, composition of matter or product; and do not fall within any one of categories of patentable subject matter. For further rejecting the claims under 35 USC §102 or 35 USC §103, Examiner interprets "machine readable medium" as "machine readable storage medium".

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10.1. Claims 1-14 and 29-41 are also rejected under 35 U.S.C. § 112, first paragraph.

Specifically, since the claimed invention as described in claims 1 and 13 is directed to non-statutory subject matter or not supported by either an asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

11. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11.1. Claims 5-6, 11 and 33-34 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 5 and 33, it recites "top K features of rank" and "top K features of a cluster" which are indefinite because the range of "K" features is unclear.

As per claims 6 and 34, it recites "at least L common features" which is indefinite because the range of "L" common features is unclear.

Further per claims 5 and 33, the claims recite "the top K features of rank" and "the top K features of a cluster" in "wherein the top K features of rank of a newly received item of information are compared with the top K features of a cluster to determine if said information is added to a cluster". There is insufficient antecedent basis for the top K features in this limitation in the claims.

As per claim 11, "an item of received information may be grouped" is recited which is indefinite because it fails to particularly group the item.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7.1. Claims 1-14 and 29-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kubota (U.S. Patent 6,041,323) in view of Charnock et al. (U.S. Patent Application 2003/0182310, hereafter "Charnock").

As per claims 1 and 29, Kubota teaches "A method" and "A computer readable medium containing instructions" (See col. 9, lines 3-9 where storage medium stores program codes providing instructions to implement method for information searching) for "dynamically updating information for publication" (See col. 1, line 60 – col. 2, line 5 and col. 9, lines 38-40 where contents and features of contents of a document change over time and database stores documents for newspaper account and patent publications) comprising:

"a) extracting from received information a set of characterizing features which characterize the received information" (See col. 1, lines 17-20, 49-51 and 60-61 where searching is performed by inputting unique character strings for subject matter of interest or inputting expressions for extracting search keys and using extracted search keys to perform search on documents whose contents' concepts or features are changes over time).

Kubota does not explicitly teach "b) grouping together received information having common characterizing features into a number of clusters", although Kubota teaches identifying unique feature member from a group of members of common characteristics at col. 3, lines 4-15.

However, Charnock teaches “b) grouping together received information having common characterizing features into a number of clusters” (See Page 2, [0063] and Pages 15-16, [0304] where documents are grouped according to its similarity and context and groups of documents are clustered in a hierarchical structure of clusters).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Charnock with Kubota reference by applying Charnock's context based techniques of searching multiple documents considered as a combined unit meeting search criteria to Kubota's document search environment where document content's features and concepts changes over time because both references are directed to documents searches and the combined teaching would have enabled Kubota's users to input complicated search concepts with simple operation and to group extracted documents into clusters, and without the need to accurately understand the search keyword as required by keyword of field searches.

The combined teaching of the Charnock and Kubota references further teaches “c) using the information obtained in the grouping step to publish information contained in a cluster based on a customer request for information” (See Charnock: Pages 15-16, [0304] where documents are grouped according to its similarity and context and groups of documents are clustered in a hierarchical structure of clusters, Kubota: col. 2, lines 55-65 where user inputs search sentence to extract unique string for searching and allocating a set of documents).

As per claims 2 and 30, the combined teaching of the Charnock and Kubota references further teaches "the received information comprises a combination of one or more of text data, image data, or video data" (See Charnock: Page 2, [0063] and Pages 15-16, [0304] where related documents of text data are grouped and groups of documents are clustered in a hierarchical structure of clusters).

As per claims 3 and 31, the combined teaching of the Charnock and Kubota references further teaches "received information comprises multiple features of a given type and wherein the multiple features are ranked in importance as the features are extracted" (See Kubota: col. 13, lines 7-9 and 46-53, and col. 5, lines 44-53 where a unique character string as a feature of input document is extracted and the candidate character string is selected based on comparison of appearances between input document and comparison document, and Charnock: Page 33 where ranks are assigned to items based on the basis of evidence accumulated during items in the information set).

As per claims 4 and 32, the combined teaching of the Charnock and Kubota references further teaches "a cluster includes a summarization of cluster features and additionally comprising comparing the features that summarize newly received information with features summarized in a cluster by taking an inner product of the features common to the newly received information and the features that summarize said cluster and combining the newly received information with a cluster if the inner

product exceeds a threshold” (See Charnock: Page 2, [0063], Pages 15-16, [0304] and Page 11, [0233] where documents are grouped according to its similarity and context and groups of documents are clustered in a hierarchical structure of clusters and clustering is completed by summarizing the arc weights, products of two arch weight parts).

As per claims 5 and 33, the combined teaching of the Charnock and Kubota references further teaches “the top K features of rank of a newly received item of information are compared with the top K features of a cluster to determine if said information is added to a cluster” (See Kubota: col. 13, lines 7-9 and 46-53, and col. 5, lines 44-53 where a unique character string as a feature of input document is extracted and the candidate character string is selected based on comparison of appearances between input document and comparison document, and Charnock: Page 33 where ranks are assigned to items based on the basis of evidence accumulated during items in the information set).

As per claims 6 and 34, the combined teaching of the Charnock and Kubota references further teaches “each feature has a relevancy factor by which the feature is scaled and additionally determining if a cluster and the newly received information have at least L common features having non-zero relevancy factors before adding the received information into a cluster” (See Charnock: Fig. 33 and Page 45, [0862]-[0863] where members in a cluster is ranked in according to match coefficients and its

multiplication with importance, and match coefficients are the attributes of specified query).

As per claims 7 and 35, the combined teaching of the Charnock and Kubota references further teaches "grouping together clusters having a common characteristics to produce a neighborhood of clusters which are all published in response to a customer request" (See Charnock: Fig. 33 and Page 45, [0862]-[0863] where clusters are ranked according to how well the canonical member matches the values of most important attributes specified in query and further).

As per claims 8 and 36, the combined teaching of the Charnock and Kubota references further teaches "the received information is a text containing document and a relevancy of a neighborhood is used to determine whether to publish documents in a neighborhood to a customer" (See Charnock: Page 2, [0063], Pages 15-16, [0304] and Page 45, [00874] where related documents of text data are grouped, and results of ranking process are shown in the order of highest scores relative to query).

As per claims 9 and 37, the combined teaching of the Charnock and Kubota references further teaches "the relevancy varies with how long the document has been in the neighborhood" (See Charnock: Pages 47-48, [0906] where mean time to the next related event of an item in a cluster is measured and its pending flag removed should there be no related event occurring during the mean time).

As per claims 10 and 38, the combined teaching of the Charnock and Kubota references further teaches "the relevancy varies with information contained in the request for information" (See Charnock: Fig. 33 and Page 45, [0862]-[0863] where members in a cluster is ranked in according to match coefficients and its multiplication with importance, and match coefficients are the attributes of specified query).

As per claim 11, the combined teaching of the Charnock and Kubota references further teaches "an item of received information may be grouped into more than one cluster but published with only one neighborhood" (See Kubota: col. 3, 4-15 where a different unique character strings retrieve the same document into different groups, and Charnock: Page 2, [0063], Pages 15-16, [0304] and Page 45, [00874] where related documents of text data are grouped, and results of ranking process are shown in the order of highest scores relative to query).

As per claims 12 and 39, the combined teaching of the Charnock and Kubota references further teaches "maintaining a null neighborhood and adding received information to the null neighborhood when said information is initially received" (See Page 14, [0280] and Page 45, [0860]-[0869] where template document is set null if none is selected and clustering analysis utilizes ordinal ranking and importance scale to rank items and score starts with 0 while user's query specification taking precedence over all any partial scoring mechanism).

As per claims 13 and 40, the combined teaching of the Charnock and Kubota references further teaches "maintaining a null neighborhood and adding received information to the null neighborhood when contents of a neighborhood change due to a reconstituting of said neighborhood" (See Page 45, [0860]-[0869] where clustering analysis utilizes ordinal ranking and importance scale to rank items and score starts with 0 while user's query specification taking precedence over all any partial scoring mechanism).

As per claims 14 and 41, the combined teaching of the Charnock and Kubota references further teaches "maintaining a null neighborhood and adding received information to the null neighborhood when a neighborhood to which the received information becomes non-relevant" (See Page 45, [0860]-[0869] where clustering analysis utilizes ordinal ranking and importance scale to rank items and score starts with 0 while user's query specification taking precedence over all any partial scoring mechanism).

Conclusion

9. The prior art made of record

A. U.S. Patent Application 2003/0182310

B. U.S. Patent No. 6,041,323

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

C. U.S. Patent Application 2005/0022114

D. U.S. Patent No. 6,029,195

E. U.S. Patent Application 2003/0061200

F. U.S. Patent Application 2003/0050927

G. U.S. Patent Application 2002/0069218

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

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Kuen S. Lu



Patent Examiner, Art Unit 2167

July 18, 2006